STATE FOREST LAND
ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.+ *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/ watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered " does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

   Timber Sale Name: **BRIGHT IDEA HARDWOOD** *Agreement #:* **30-076147**

2. Name of applicant:

   Department of Natural Resources

3. Address and phone number of applicant and contact person:

   Pacific Cascade Region
   601 Bond Road
   Castle Rock, WA
   360-577-2025
   Contact: Bud Clark

4. Date checklist prepared: **02/11/2004**

5. Agency requesting checklist:

   Washington Department of Natural Resources.

6. Proposed timing or schedule (including phasing, if applicable):
   a. *Auction Date:* **2004**
   b. *Planned contract end date (but may be extended):* **2006**
   c. *Phasing:* **N/A**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   Timber Sale

   a) *Site preparation:* **A site prep herbicide plus a pre-emergent will be applied to Unit #1 to control competing brush.**

   b) *Regeneration Method:*

a.	*TSU NO :1 HAND PLANT*	**01/01/2007**	**74 Acres**
b.	*TSU NO :2 HAND PLANT*	**01/01/2007**	**8 Acres**
c.	*TSU NO:3 HAND PLANT*	**01/01/2007**	**6 Acres**

   c) *Vegetation Management:* **Vegetation management may be necessary in the future but is not planned at this time.**

   d) *Thinning:* **Pre-commercial thinning may be necessary in the future. Thinning is not expected at this time.**

Roads: **Roads remaining at the termination of the sale will be used for future forest management activities. Road maintenance and periodic ditch and culvert cleanout will occur as necessary.**

Rock Pits and/or Sale: **Rock for this proposal may come from a rock pit on State land located in NE 1/4 of Section 32, Township 12 North, Range 02 East W.M. This rock pit may be used in conjunction with future sales. A harvest date has not been set for these future potential sales at this time.**

Other: **Landing slash piles may be burned upon completion of logging.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

☐*303 (d) – listed water body in WAU:* ☐*temp* ☐*sediment* ☐*completed TMDL (total maximum daily load):*
☐*Landscape plan:*
☐*Watershed analysis:*
☐*Interdisciplinary team (ID Team) report:*
☒*Road design plan:* **Available at Pacific Cascade Region office.**
☐*Wildlife report:*
☒*Geotechnical report:* **Available at Pacific Cascade Region office.**
☐*Other specialist report(s):*
☐*Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*
☒*Rock pit plan:* **Available at Pacific Cascade Region office.**
☒*Other:* **Forest Resource Plan (July 1992); Habitat Conservation Plan (September 1997); State Soil Survey; South Coast Planning Unit Marbled Murrelet Habitat Reclassification Map; ESA Listed Salmonid Species Map from Forest Practices; and Forestry Handbook (August 1999.) Available at Pacific Cascade Region office.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known.

10. List any government approvals or permits that will be needed for your proposal, if known.

☒*HPA*: **Blanket Hydraulic Permit Application, Log Number ST-D9199-04 and GH-F5981-01** ☒*Burning permit* ☐*Shoreline permit* ☒*Incidental take permit:* **1168 and PRT-812521** ☒*FPA #* _____ ☐*Other:*

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. Complete proposal description:

Approximately 148.25 acres of 55-year-old timber were considered for this proposal. Approximatley 34 acres, designated as Riparian Management Zones (RMZs) were bounded out of the proposed harvest area. A RMZ averaging 200 feet wide will be left along a type 1 water (Cowlitz River) and a RMZ averaging 165 feet wide will be left along a type 3 water (Brights Creek). Field reconnassaince revealed approximately three acres of potentially unstable slopes located between Unit #1 and the RMZ along the Cowlitz River. This area will not be included in the harvest area. A six-acre forested wetland adjacent to Unit #2, a five-acre forested wetland adjacent to Unit #3, and a five-acre Wetland Manangement Zone (WMZ) at least 100 feet wide adjacent to a 0.75 acre wetland north of Unit #3, were also bounded out of the proposed harvest area. Unit #2 is a WMZ approximately eight acres in size and Unit #3 is a WMZ approximately six acres in size. These WMZs (Units #2 and #3), averaging 165 feet wide, will be thinned to basal area120. Unit #1 is approximately 74 acres in size. A forested wetland less than 0.25 acre is located within Unit #1. Within Unit #1 a total of 592 trees will be left as wildlife and snag recruitment trees. These trees are in six small clumps (approximately three acres) and/or scattered within and adjacent to the 74-acre even-aged harvest unit. These trees will also aid in fragmenting the appearance of the harvested area when viewed from the north side of the Cowlitz River at the Barrier Dam, a popular fishing area and boat launch. A small leave tree clump will be left outside of the proposed harvest area. This leave tree clump is located north of Unit #3 and south of the W-1300 Ext. road. In addition, approximately six acres will be harvested as right-of-way to facilitate road construction and reconstruction and approximately 0.5 acres will be cut to facilitate rock pit expansion.

There will be approximately 1,844 feet of required road construction; 4,505 feet of optional construction, of which 3,411 feet will be abandoned, if constructed; 1,371 feet of optional reconstruction; and 10,060 feet of required reconstruction. A bridge will be constructed over Brights Creek and a fish passable culvert will be installed in a tributary to Brights Creek.

b. Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.

Pre-harvest description:
The stands in these Forest Management Units (FMUs) are mixed species stands predominately comprised of red alder, bigleaf maple, with a Douglas-fir, red cedar, grand fir, Pacific silver fir, and western hemlock component. Black cottonwood and Oregon ash are also present in the stand. The understory contains swordfern, vine maple, salmonberry, huckleberry, skunk cabbage, devil's club, slough sedge, and salal. Timber selected for harvest for rock pit expansion and timber adjacent to the proposed rock pit is approximately 25 years old and consists primarily of Douglas-fir.
***Current stand characteristics of Units #1, #2, #3*:**
Age: 55 yrs.(est. origin: 1948-49)
Mbf/ac: 20 (8 Mbf. conifer, 12 Mbf. hardwoods—all units)
Down Woody Debris: 3-5 logs/ac 7"-14"dia., 1-2 logs/ac>14"dia.
Snags: 3-4 snags/ac >14"dbh/ac

Type of harvest:
Timber Sale Unit (TSU) #1: Regeneration harvest of 74 acres with an average of eight leave trees per acre scattered and clumped within and adjacent to the timber sale harvest area. Approximately 1792 Mbf. of timber will be removed. Shovel equipment, tracked skidder, and cable systems may be utilized to harvest.

TSU #2: Partial-cut harvest of approximately eight acres. Approximately 17 Mbf. of timber will be removed using shovel logging and/or tracked skidders and will maintain at least 120 square feet per acre basal area within the stand.

TSU #3: Partial cut harvest of six acres. Approximately 26 Mbf. of timber will be removed using shovel logging and/or tracked skidders and will maintain at least 120 square feet per acre basal area within the stand.

Another 42 Mbf. of timber will be removed from within the right-of-way clearing limits on portions of the W-1300 road.

Approximately 4 Mbf. of timber will be removed for rock pit expansion.

Overall Unit Objective:

1. Maximize revenue. Harvest objectives for this proposal are to provide revenue for trust beneficiaries through sustainable forestry.
2. Manage visual impacts to the landscape when viewed from north side of the Cowlitz River while meeting the obligations of the Forest Practices rules and the DNR's HCP.
3. Maintain water quality and fish habitat, retain retention trees, and minimize impacts to soils.

The units will be replanted after harvest or will be allowed to regenerate naturally.

c. *Road activity summary. See also forest practice application (FPA) for maps and more details.*

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		**6,349**	**9**	
Reconstruction		**11,431**		
Abandonment		**3,411**	**4**	
Bridge Install/Replace	**1**			
Culvert Install/Replace (fish)	**1**			
Culvert Install/Replace (no fish)	**8**			

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. *(See timber sale map. See also color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

a. Legal description:

T12N R1E S24
T12N R1E S25
T12N R2E S32

b. *Distance and direction from nearest town (include road names):*

This proposal is located approximately 14 miles southwest of Silver Creek, WA, via State Route 12, Winston Creek Road, W-1000 road, and theW-1300 road.

c. *Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")*

WAU Name	WAU Acres	Proposal Acres
MILL CREEK	28,094	148.25

13. *Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)*

This proposal is located within the southern portion of the Mill Creek WAU adjacent to the Cowlitz River near the confluence of Brights Creek. This WAU contains a mixture of home sites, agriculture, and industrial and small landowner managed forestland. Most of this WAU is hilly with the very northern portion containing steep slopes. Approximately 28% of the WAU is managed as industrial forest. Areas adjacent to main roads (SR 12, SR 508, and other county roads) are primarily agricultural/residential. Forest Practice applications (referenced above on the DNR web site) indicate that some blocks of forestland are intensively managed. DNR managed lands are managed under provisions in the Habitat Conservation Plan, Forest Practices rules, and the Forest Resource Plan (July, 1992)

The following table is an estimated summary of past and future activity on DNR-managed land and privately managed land in the WAU (information is based off of Forest Practices applications that have been approved in the last seven years as of June 18, 2003 compiled by the Department's GIS database). No attempt was made to predict future timber harvest on private ownerships within the WAU. The source of this information only provided the acreage on the WAU level. Approximately 86% of the land managed by the DNR in the Mill Creek WAU is covered with vegetation greater than 25-years-old.

Mill Creek WAU	WAU ACRES	ACRES OF EVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	ACRES OF UNEVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	PROPOSED EVEN-AGED HARVEST IN THE FUTURE (FY 2004/2005)	PROPOSED UNEVEN-AGED HARVEST IN THE FUTURE (FY 2004/2005)
DNR MANAGED LAND	**2,498**	**51**	**314**	**~74 ac.**	**~14 ac.**
PRIVATE OWNERSHIP	**25,596**	**2,738**	**1,154**	**UNKNOWN**	**UNKNOWN**
TOTAL	**28,094**	**2,789**	**1,468**	**~74 ac.**	**~14 ac.**

The Forest Resource Plan is used in assessing future potential harvest units. The Resource Plan sets policy, among other things, on harvest age, unit size and timing of adjacent harvest units. Three commercial thinnings (aprox. 220 ac.) and one even-aged harvest (approx. 50 ac.) in this sub-basin are anticipated on DNR managed land within the next ten years and some additional road construction will be required to access these areas. The 29-year-old Douglas-fir stand to the south of the proposal may be commercially thinned within that time frame. Future activities planned by the DNR should result in minimal change to this portion of the Mill Creek WAU. Some of this change will be in the form of constructing roads. Within the Mill Creek WAU there are 3.9 miles of existing roads per square mile on DNR managed lands. On non-DNR managed lands there are 4.8 miles of roads per square mile. This proposal may add 0.7 miles of permanent road to the Mill Creek WAU and subsequent timber sales may increase the amount of roads within this sub-basin.

The DNR has an agreement with the federal government concerning threatened and endangered species and their habitats, which requires the Department to manage landscapes in a conservative manner. This agreement substantially helps the Department to mitigate for potential cumulative effects related to its management activities. The HCP is designed to protect and maintain fish and wildlife species and their habitats over a broad regional area. The applicable HCP strategies incorporated into this proposal are as follows:

- **Retaining a RMZ averaging 200 feet wide along a a type one water (Cowlitz River).**
- **Retaining a RMZ averaging 165 feet wide along a type 3 water (Brights Creek).**
- **Bounding out three acres of potentially unstable slopes from Unit #1.**
- **Bounding out a six-acre forested wetland adjacent to Unit #2, a five-acre forested wetland adjacent to Unit #3, and 0.75-acre wetland and five-acre Wetland Manangement Zone (WMZ) (at least 100 feet wide) north of Unit #3, from the proposed harvest area.**
- **Retaining basal area 120 within Unit #2 (a WMZ approximately eight acres in size) and Unit #3 (a WMZ approximately six acres in size). These WMZs (Units #2 and #3) average 165 feet wide.**
- **Retaining an average of eight leave trees per acre scattered and clumped throughout the Unit #1.**
- **Analyze, design, and construct a road system to minimize effects on the environment.**
- **Installing two fish-passable structures during road reconstruction.**

Retaining RMZs and WMZs helps maintain water quality, stream bank integrity, and stream temperature. RMZs and WMZs also provide large organic debris (LOD) recruitment and habitat for riparian obligate species. Furthermore, they will develop older-forest characteristics to help support older-forest dependant wildlife populations. The strategy retaining eight leave trees per acre in the regeneration harvest area (Unit #1) should provides legacy elements for recruitment of future snags, coarse woody debris, multi-layered stands, and large diameter trees. In combination, these features will provide elements of older forest habitat characteristics within the third growth stand. By managing to develop older forest characteristics, habitats will be provided for wildlife species dependent on older forest habitat. Finally, road system analysis and design required under the HCP and the Forest Practices RMAP process will improve roads and minimize road impacts on the environment.

The Washington Department of Fish and Wildlife has the authority to post and close aquatic lands and adjacent uplands which are managed by the Department of Natural Resources in Sections 23 and 24, Township 12 North, Range 1 East, W.M.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☐Rolling, ☒Hilly, ☐Steep Slopes, ☐Mountainous, ☐Other:

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).

The Mill Creek WAU ranges from 200-3,000 feet in elevation with the southern portion consisting of a sequence of terraces with rolling surfaces and steep escarpments marking the terrace edges. The terrace widths become broader and their surfaces more dissected moving northward away from the the Cowlitz River. The terraces ultimately merge into the hilly terrain found in the northern portion of the WAU. The WAU averages 45 inches of precipitation on the southern half of the WAU to 60 inches of precipitation on the northern end of the WAU. The primary forest vegetation zone is western Douglas-fir.

2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).

This proposal area ranges from 257 feet to 532 feet in elevation. It is located in the southern half of the WAU and fits the general description of the Mill Creek WAU. The majority of the proposed sale is superposed on the upper two, essentially flat-topped terraces within what appears to be a sequence of at least three terraces extending along this portion of the Cowlitz River. The lower-most slopes in the western-most portion of the sale are just above the partially scoured overflow channel or floodway that has formed on the inside of the main bend along this river reach. The slopes within the sale area have mostly northern and southern aspects and thus, most of the unit drains both northward into the Cowlitz River and southward into the northwestward-flowing Brights Creek (type 3), a comparatively small tributary of the Cowlitz.

b. What is the steepest slope on the site (approximate percent slope)?

The steepest slope on the site is approximately 60%.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

State Soil Survey #	Soil Texture or Soil Complex Name	% Slope	Acres	Mass Wasting Potential	Erosion Potential
3940	SILT LOAM	0-3	60	INSIGNIFICANT	LOW
9136	GRAVELLY LOAM	0-8	17	INSIGNIFICANT	LOW
9426	V.COBBLY SANDY LOAM	30-90	11	HIGH	HIGH

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) Surface indications:

Loose, unvegetated gravels and fallen trees mark several active debris slide areas found along the terrace edge immediately adjacent to the river but well outside the boundary of the sale. Old debris slide scars are apparent as narrow, partially vegetated chutes along the abrupt, steep side slopes of the upper-most terrace. Wet seep areas with poorly consolidated sands and gravels overlying the compact, desnse sands and silts, thought to represent till, are exposed within the scars.

2) Is there evidence of natural slope failures in the sub-basin(s)?
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*

Subarcuate to arcuate scarps and corresponding benches mark some fairly large deep-seated, translational (slump-like without backward rotation) features occurring along river adjacent terrace edges. However, their subdued character indicates little, if any, recent movement has occurred. Locally, poorly formed scarps and subtle rolling surfaces mark moderate to small areas along terrace edges that appear to have undergone slumping and some slow flow and where accessible, the slip plane has been observed to occur along a thick layer of coalified wood typically underlain by an ash horizon. Several of these features appear to be currently active under forested conditions and where terrace edges act essentially as free faces. Scars of shallow failures are apparent along some of the more exposed terrace edges and more probably exist within forested areas but because of the size are not readily apparent.

3) Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?
☒*No* ☐*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*
Associated management activity:

Although not field verified, in a few areas, some possible shallow failures appear to be associated with skid trails along steeper terrace slopes. Across the river from the sale area, it appears that a slump-earthflow has been either reactivated or was initiated as the consequence of debuttressing or oversteepening where the hatchery access road is constructed across the terrace edge. The most obvious and active failures are along the high terrace edge above the 'barrier' dam and adjacent to the river outside of the sale. This river reach is just below the Mayfield Dam and it appears, based on photo history, that these active slides were initiated as a consequence of emergency spilling during the storm/flood events of Nov. 1995 and Feb. 1996.

4) Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?
☒*No* ☐*Yes, describe similarities between the conditions and activities on these sites:*

Failures have occurred along steep terrace edges and although terrace edges are within the sale area they are not the steep, abrupt, and high variety along which failures seem to occur.

5) Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.

The northeastern boundary of the sale was set back from the steep front of the upper-most terrace and along which indicators of debris slides were observed. The southern boundary of the sale was set back from Those areas that appeared to be potentially unstable along the fairly steep side slopes of the draw formed by Brights Creek cutting through the terrace materials south side of the sale are mostly within the required RMZ width and thus, are protected. However, in a couple convergent areas along the draw potentially unstable slopes extend a short distance upland of the RMZ and in those places, trees will be left to provide additional protection. Ground based harvesting equipment will be prohibited from operating on slopes greater than 30%.

Two potential road locations were considered to access the northwest portion of Unit #1. The first alternative considered constructing approximately 1300 feet of new road with a more favorable grade through the northwest portion of the unit. However, approximately 500 feet of full bench construction across steep slopes underlain by the xerorthents soil type (v. cobbly sandy loam) which is characterized by a high mass wasting and erosion potential on steep slopes (approximately 60%).

The second alternative considered using approximately 1000 feet of an existing road bed (considered optional construction in the Road Plan) to harvest the northwest portion of the unit. The existing road bed is located within a RMZ averaging 165 feet wide along a type 3 stream and coinciding with of the upper terrace front that extends into the sale area (this is optional construction and thus, may not even be built). Because few indicators of instability were observed along this pre-existing (constructed late '40s) road, it appears that the road has had little impact, over time, on the slope it cuts. This fact, along with the fact that no new construction would be required along even steeper slopes and that reconstruction would result in less ground disturbance, made the second alternative more preferable even though it is within the RMZ. Although indicators of potential instability and incepted subsurface flow are lacking, measures will still be implemented to minimize disturbance of both the existing roadbed and cutbanks.

Drainage structures will be added to assure that runoff is directed by ditches and cross drains to discharge onto the forest floor and avoid discharge into the type 3 stream. Such drainage measures will also reduce the potential for runoff to be concentrated to any one discharge point and thereby, reduce the possibility of erosion or mass wasting

The second alternative, using the existing road within the RMZ, was chosen. By utilizing the existing road bed instead of constructing road across steep slopes, the second alternative would result in less ground disturbance and fewer feet of road construction. Full bench construction would not be required on steep slopes if the second alternative was chosen. The existing road will be abandoned after harvest and thus, no permanent road will be left within the RMZ or on steep slopes. Road abandonment will consist of: ripping and outsloping the surface; removing embankments and sidecast fill; placing material into cutbanks; grass seeding and replanting; covering all exposed soils within 100 feet of any live stream with straw. In order to utilize the road bed within the RMZ, a few trees (approximately 5-10 trees) may need to be cut; however, the trees that may be cut will be left on site within the RMZ. Construction of this road will not be permitted from September 30 to May 1 unless authorized by the Contract Administrator.

Additionally, some trees have been designated to remain along other slopes areas that may be sensitive and thus, will help limit ground disturbance and maintain root strength along those slope areas. By harvesting only select trees from the wetland areas along the terrace top, increased runoff and recharge will be avoided because the remaining trees will continue interception and evapotranspiration functions. Because the wetland areas may represent the possible recharge areas for some of the subsurface flow emerging in old debris slide scars along the northern terrace front, avoiding increased recharge will help reduce the potential for increased mass wasting.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: **9.0** *Approx. acreage new landings:* **2** *Fill source:* **Does not apply.**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Yes, some surface erosion may occur on exposed cut slopes, fill slopes and newly abandoned roads during the first year following completed roadwork.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*

Approximately 6% of this proposal in permanent road running surface (gravel roads).

h. Propose measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)

Road construction will not be allowed between September 30 and May 1 unless authorized by the Contract Administrator. Hauling of wood products shall be suspended if rutting exceeds six inches on roads. Cut and fill slopes on newly constructed roads will be re-vegetated to help reduce the potential for erosion and proper road location, design, and construction techniques will reduce the potential for slope failures associated with roads. Some newly constructed and some reconstructed roads will be abandoned following the completion of harvest except for those needed for plantation maintenance. Drainage controls measures will be appropriately designed, located, constructed, and maintained to control surface water runoff in order to avoid erosion, sediment transport, and delivery to flowing water.

See B.1.5.d.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust *from truck traffic, rock mining, crushing or hauling,* automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Minimal amounts of engine exhaust from logging equipment, log truck, and automobile traffic will be emitted as a result of this proposal. If landing slash piles are burned following harvest activities, smoke will be emitted into the air.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Landing slash piles will be burned in accordance with the Washington State Smoke Management Program. A burn permit will be obtained, if landing slash piles are burned.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. *(See timber sale map and forest practice base maps.)*

Yes, all streams within or adjacent to the proposal have been verified and typed using the Forest Practices Water Typing Rules, dated July 2001. Brights Creek, a type 3 stream, flows southeast to northwest along the west side of the proposal location and is a tributary to the Cowlitz River . The Cowlitz River is on the north of the site. There are three wetlands (6ac., 5ac., 0.75 ac.) adjacent to the site.

a) Downstream water bodies:

Cowlitz River.

b) Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Cowlitz River	**1**	**1**	**200**
Brights Creek	**3**	**1**	**165**
Wetland	**Forested >1 ac.**	**2**	**165**
Wetland	**Forested <1 ac.**	**1**	**100**
Wetland	**Forested <0.25 ac.**	**1**	**0**
Stream	**5**	**1**	**0**

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers

RMZs for this proposal have been designed in accordance with the Department's current HCP procedures. A Riparian Management Zone averaging 200 feet wide will be left along one type 1 stream (Cowlitz River). A Riparian Management Zone averaging 165 feet wide will be left adjacent to a type 3 stream (Brights Creek). Road construction will occur within the 165-foot-wide RMZ along Brights Creek. Trees within the RMZ may be cut in order to facilitate road construction and the hauling of forest products; however, the trees will be left on-site. Care will be taken to minimize disturbance of the soil and vegetation during road construction. Wetland Management Zones (thinned to basal area 120) averaging 165 feet will be left adjacent to two forested wetlands greater than one acre in size. A Wetland Management Zone (no-cut) at least 100 feet wide will be left along a forested wetland approximately 0.75 acres in size. Road construction will occur within the WMZ. The proposed road construction will be along an old road grade; the road construction will not require new fill. There will be minimal disturbance of the vegetation during construction of the road through the WMZ. One forested wetland, less than 0.25 acres in size, is located along the south edge inside Unit #1. A leave tree clump will be left along the wetland inside of the unit.

No wind buffers will be left along RMZs adjacent to the typed streams. Wind buffers will not be left along the windward side of RMZs due to the direction of prevailing winds and xerorthents soil type within the RMZs, which is characterized as having low windthrow potential.

During road reconstruction, a bridge will be placed over Brights Creek. A fish-passable culvert will be installed within a stream tributary to Brights Creek.

A culvert will be installed in a type 5 stream during road reconstruction.

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐*No* ☒*Yes (See RMZ/WMZ table above and timber sale map.)*
Description (include culverts):

During road reconstruction, a bridge will be installed over Brights Creek. A fish-passable culvert will be installed within a stream tributary to Brights Creek. A culvert will be installed in a type 5 stream during road reconstruction.

Timber harvest will occur approximately 165 feet from Brights Creek, a type 3 stream. Road construction will occur within the 165-foot-wide RMZ along Brights Creek. For a short distance (approximately 300 feet) this road construction will be located within ten feet of the floodplain. This road location is on a existing old road grade and it was determined to be the best location for accessing the north end of the unit because it avoided full bench construction on steep slopes. Trees within the RMZ may be cut in order to facilitate road construction and the hauling of forest products; however, the trees will be left on-site.

Wetland Management Zones averaging 165 feet wide will be thinned to basal area 120. Even-aged timber harvest will also occur an average of 165 feet from two forested wetlands that are greater than one acre in size.

A forested wetland approximately 0.75 acres in size has been bounded out of the proposed harvest unit. A no-cut WMZ at least 100 feet wide will be left adjacent to this wetland. Road construction will occur within the WMZ. The proposed road construction will be along an old road grade; the road construction will not require new fill. There will be minimal disturbance of the vegetation during construction of the road through the WMZ. No timber will be harvested for this road construction. The WMZ will remain unthinned, maintaining the current stocking as mitigation for constructing this road.

Timber harvest may occur over and within one forested wetland, less than 0.25 acres in size, located along the south edge inside Unit #1. A leave tree clump will be left along the wetland inside of the unit.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Fill material will be placed over the culvert installations in type-3 streams during road reconstruction. No fill will be removed or added to surface water or wetlands.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. *(Include diversions for fish-passage culvert installation.)*
☐*No* ☒*Yes, description:*

Water will be temporarily diverted during the fish-passage culvert and/or bridge installation on Brights Creek and on a tributary of Brights Creek. If necessary, water may temporarily be diverted during the installation of a culvert within a type 5 stream.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☐*No* ☒*Yes, describe location:*

The culvert installation and bridge installation within/over two type 3 streams will also lie within the 100-year floodplain. Road construction will occur within the 165-foot-wide RMZ along Brights Creek. For a short distance (approximately 300 feet) this road construction will be located within ten feet of the floodplain.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒*No* ☐*Yes, type and volume:*

7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?

Yes, the sub-basin contains soils or terrain susceptible to surface erosion and/or mass wasting.

8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?
☒*No* ☐*Yes, describe changes and possible causes:*

9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☒*No* ☐*Yes, explain:*

10) What are the approximate road miles per square mile in the WAU and sub-basin(s)?

Within the Mill Creek WAU there are 3.9 miles of existing roads per square mile on DNR managed lands. On non-DNR managed lands there 4.8 miles of roads per square mile. This proposal may add 0.7 miles of permanent road to the Mill Creek WAU and subsequent timber sales may increase the amount of roads within this sub-basin.

Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☒*No* ☐*Yes, describe:*

Of the roads observed in the WAU (primarily DNR roads and DNR easement roads across private property) only a small portion of the roads intercept sub-surface flow and deliver it to streams. In recent years, an emphasis has been placed on using more cross-drain culverts both on new road construction and on existing road reconstruction. This has resulted in more ditch water being discarded back to the forest floor.

*11) Is the proposal within a significant rain-on-snow (ROS) zone? If not, **STOP HERE** and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*
☒*No* ☐*Yes, approximate percent of WAU in significant ROS zone.*
Approximate percent of sub-basin(s):

12) If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?

13) Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?
☐*No* ☒*Yes, describe observations*

The vegetation found on the Cowlitz River floodway and the apparent height of this floodway above the current riverbank suggest that overflow into the floodway probably occurs only during the highest peak flows and/or flood events.

14) Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.

This proposal may slightly change the timing, duration and the amount of water in a peak flow event. Flow rates may increase slightly due to decreased transpiration and interception resulting from harvest. However, unit size, location (not in Rain-on Snow Zone), RMZs and WMZs, and Forest Resource Plan green-up policies should limit contributions to peak flow.

15) Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?
☐*No* ☒*Yes, possible impacts:*

There are fish hatcheries at Blue Creek and at the Barrier Dam on the Cowlitz River; the water supply for these facilities comes from the Cowlitz River. The fish hatcheries are located approximately 1000 feet north of the proposal on the other side of the Cowlitz River. This proposal may slightly change the timing, duration and the amount of water being contributed to the Cowlitz River. This proposal is designed to minimize the risk of affecting water quality used at these facilites. A RMZ averaging 200 feet wide will be left between the proposed harvest area and the Cowlitz River. A RMZ averaging 165 feet wide will also be left along one type 3 stream that is tributary to the Cowlitz River.

16) *Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.*

The following measures will address possible peak flow/flooding impacts:

1. **Increasing the number of culverts to discharge water to the forest floor.**
2. **Designating RMZs averaging 165 feet wide along one type 3 stream.**
3. **Limit future harvest unit sizes to less than 100 acres and follow Forest Resource Plan green-up policies before harvesting adjacent DNR stands. The proposed harvest area is 94.5 acres in size. The largest unit is 74 acres in size.**

b. Ground *Water*:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Insignificant amounts of lubricants may be inadvertently discharged as a result of heavy equipment use (See B.7.a.1.). No lubricants will be disposed of on site.

3) Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?
☐*No* ☒*Yes, describe:*

There are wells that supply the Blue Creek fish hatchery down stream of the proposal area but this activity should not adversely affect ground water supply to these wells.

a) Note protection measures, if any.

A RMZ averaging 200 feet wide will be left between the proposed harvest area and the Cowlitz River. A RMZ averaging 165 feet wide will also be left along one type 3 stream that is tributary to the Cowlitz River.

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Storm runoff will be collected in ditches and discharged through cross drain culverts to the forest floor. Culverts will be placed at a location to minimize the amount of water runoff directly entering existing stream channels.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Insignificant amounts of lubricants may be inadvertently discharged as a result of heavy equipment use (See B.7.a.1.). No lubricants will be disposed of on site.

a) Note protection measures, if any.

Equipment use will be limited along streams in accordance with Forest Practices rules. Concentrations of logging slash will be removed from flowing streams. No lubricants will be disposed of onsite. See 3.a.1.c.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)

See B.1.h. and B.1.5.d.

Landings and retention trees will be positioned in locations to help divert felling and yarding away from flowing waters. Shovel logging shall be in accordance with Shovel Logging Specifications. Yarding may be suspended at the discretion of the Contract Administrator when soil rutting exceeds four inches as measured from the natural ground line when there is potential for damage to any public resource. If yarding is suspended, the Contract Administrator must be assured that future harvest operations will not potentially damage any public resource. Any and/or all operation(s) of this sale may be temporarily suspended when, in the opinion of the Contract Administrator, there is the possibility of sediment being delivered to any flowing water tributary to any fish-bearing stream.

RMZs averaging 165 feet wide along one type 3 stream and averaging 200 feet along the Cowlitz River (a type one stream) should help protect stream banks and reduce the potential for sediment delivery. WMZs averaging 165 feet wide along two forested wetlands greater than one acre (which will be thinned to BA 120) and a WMZ at leasat 100 feet wide along a forested wetland less than one acre(and > 0.25ac.) will help maintain wetland integrity.

4. Plants

a. Check or circle types of vegetation found on the site:

☒deciduous tree: ☒alder, ☒ maple, ☐ aspen, ☒*cottonwood,* ☐*western larch,* ☐*birch,* ☒other: Black cherry, vine maple, ash
☒evergreen tree: ☒*Douglas-fir,* ☒*grand fir,* ☒*Pacific silver fir,* ☐*ponderosa pine,* ☐*lodgepole pine,* ☒*western hemlock,* ☐*mountain hemlock,* ☐*Englemann spruce,* ☐*Sitka spruce,* ☒*red cedar,* ☐*yellow cedar,* ☐other:
☒shrubs: ☒*huckleberry,* ☒*salmonberry,* ☒*salal,* ☐*other:*
☐grass
☐pasture
☐crop or grain
☒wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☒skunk cabbage, ☒*devil's club,* ☒other: slough sedge, sword fern
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☐other types of vegetation:
☐*plant communities of concern:*

b. What kind and amount of vegetation will be removed or altered? *(See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)*

Less than 93% of the overstory vegetation will be removed from the 74-acre regeneration harvest area. Vegetation will not be altered or removed from Riparian Management Zones outside of road construction right-of-way limits. The total basal area of timber within Wetland Management Zones averaging 165 feet wide along two forested wetlands less than one acre in size will be reduced to an minimum of 120 square feet of basal area per acre.

1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")

The harvest unit is bordered to the north by an average 200-foot-wide RMZ and leave area of 55-year-old mixed conifer/hardwood timber. To the east the harvest unit is bordered by a WMZ averaging 165 feet wide comprised of 55-year-old mixed conifer/hardwood timber. To the west lies a RMZ of 55-year-old mixed conifer/hardwood timber and a WMZ averaging 165 feet wide. To the south lies a 29-year-old Douglas-fir stand. See A.11.

2) Retention tree plan:

Approximately eight trees per acre (a total of 592 trees) will be retained within the regeneration portion of the harvest unit (Unit #1). Retention trees in approximately six small clumps of 20-50 trees along with individually scattered leave trees will be left in and adjacent to the harvest unit. Approximately 120 trees per acre will be left within Units #2 and #3 to retain a basal area 120 within the WMZs. One forested wetland, less than 0.25 acres in size, is located along the south edge inside Unit #1. A leave tree clump will be left along the wetland inside of the unit.

c. List threatened or endangered *plant* species known to be on or near the site.

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
None Found in Database Search				

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

None.

5. Animal

a. Circle or check any birds animals *or unique habitats* which have been observed on or near the site or are known to be on or near the site:

birds: ☒hawk, ☒heron, ☒eagle, ☒songbirds, ☒*pigeon,* ☒other: osprey
mammals: ☐deer, ☒bear, ☐elk, ☒beaver, ☐other:
fish: ☐bass, ☒salmon, ☒trout, ☐herring, ☐shellfish, ☒other: Cascade torrent salamander
unique habitats: ☐*talus slopes,* ☐*caves,* ☐*cliffs,* ☐*oak woodlands,* ☐*balds,* ☐*mineral springs*

b. List any threatened or endangered species known to be on or near the site *(include federal- and state-listed species).*

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
None Found in Database Search				

This proposal lies within the range of the federally listed bull trout and its habitat. The DNR's HCP riparian strategy protects the habitat of the bull trout.

The proposal lies within Evolutionarily Significant Units (ESUs) for Lower Columbia River Chinook, Columbia River Chum and Lower Columbia River Steelhead, all threatened species.
There are three occurrences of osprey nests (listed as a Species of Concern); approximately ½ mile north, 200 feet north, and ½ mile east of the proposed harvest area. The nests are not within the harvest unit; therefore, no additional protection will be implemented.

There is an occurrence of Cascade torrent salamander (listed as a Species of Concern) approximately 800 feet north (north side of the Cowlitz River) of the proposed harvest area. Due to the distance from the Cascade torrent salamander occurrence and the timber sale units, no protection will be implemented.

The harvest unit is within 200' of a WDFW special emphasis area containing regular concentrations of bald eagles. After contacting WDFW, no additional protection is necessary.

c. Is the site part of a migration route? If so, explain.
☒*Pacific flyway* ☐*Other migration route:* *Explain if any boxes checked:*

This site is part of the Pacific flyway but is not used extensively for resting or feeding by waterfowl.

d. Proposed measures to preserve or enhance wildlife, if any:

By designing this sale to comply with the State's HCP, wildlife and wildlife habitat will be retained. A total of 592 retention trees will be left after harvest within Unit #1. Retention trees serve as perches and nest sites. Trees left along flowing waters are conducive to water quality (salmonid habitat) and serve as protection areas for wildlife habitat. Retention trees in clumps will remain in Unit #1 to serve as ecological niches for wildlife. Larger diameter trees that have large limbs, open crowns, and broken tops will be left to preserve current habitat needs and provide future habitat opportunities for many species. These trees will become snags and retention trees in future generations. The trees left in the proposal will protect and enhance riparian functions by increasing shade and bank stability; and keep air and water temperatures cool. Wetland Management Zones (thinned to basal area 120) averaging 165 feet will be left adjacent to two forested wetlands greater than one acre in size. A Wetland Management Zone (no-cut) at least 100 feet wide will be left along a forested wetland less than one acre in size. Along with WMZs, a Riparian Management Zone averaging 165 feet wide along the type 3 stream (Brights Creek) and a RMZ averaging 200 feet wide along a type 1 stream (Cowlitz River) will maintain water quality; provide migratory corridors for wildlife; and maintain habitat for fish, reptiles, and other riparian obligate species.

1) Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.

See B.5d. above.

Species /Habitat: **Chinook salmon, steelhead, and bull trout**
Protection Measures: **Streams or habitats characterized as having Chinook salmon, steelhead, and bull trout habitat have been bounded out of the harvest area. A Riparian Management Zone averaging 165 feet wide adjacent to one type 3 stream and a RMZ averaging 200 feet wide along a type 1 stream should provide habitat for Chinook salmon, steelhead, bull trout and other fish.**

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Does not apply.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

Does not apply.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Does not apply.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

Minimal hazard incidental to operation heavy machinery such as the risk of fire or small amounts of oil and other lubricants accidentally discharged as a result of heavy equipment use.

1) Describe special emergency services that might be required.

There are not any special emergency services required at this time. Pump trucks and/or pump trailers will be required on site during fire season. In the event of a lubricant spill, the Purchaser shall contact the DNR and the Department of Ecology and begin immediate containment and clean-up of the spill.

2) Proposed measures to reduce or control environmental health hazards, if any:

No oil or lubricants will be disposed of on site. The cessation of operations may occur during periods of time when the risk of fire may increase. Fire tools and equipment will be kept on site during fire season. In the event of a lubricant spill, the Purchaser shall contact the DNR and the Department of Ecology and begin immediate containment and clean-up of the spill.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Does not apply.

2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.

Minimal noise levels associated with logging operations and truck traffic. No long-term impacts.

3) Proposed measures to reduce or control noise impacts, if any:

None.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? (Site includes the complete proposal, e.g. rock pits and access roads.)

Timber production and forest management activities.

b. Has the site been used for agriculture? If so, describe.

No.

c. Describe any structures on the site.

None.

d. Will any structures be demolished? If so, what?

No.

e. What is the current zoning classification of the site?

Forestry.

f. What is the current comprehensive plan designation of the site?

Long-term forestry.

g. If applicable, what is the current shoreline master program designation of the site?

Does not apply.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

Does not apply.

i. Approximately how many people would reside or work in the completed project?

Does not apply.

j. Approximately how many people would the completed project displace?

Does not apply.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Does not apply.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

This proposal has been laid out in accordance with the current DNR Forest Resource Plan (July 1992), HCP (September 1997), and current Forest Practices rules as they apply in conjunction with the current land use classifications.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Does not apply.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Does not apply.

c. Proposed measures to reduce or control housing impacts, if any:

Does not apply.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?

Does not apply.

b. What views in the immediate vicinity would be altered or obstructed?

1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
☐No ☒Yes, viewing location: **The Barrier Dam boat launch.**

2) Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?
☒No ☐Yes, scenic corridor name:

3) How will this proposal affect any views described in 1) or 2) above?

Portions of the site that may be viewed from the boat launch and the approach from Spencer Road will be changed form a forested landscape to a more fragmented viewshed containing openings with clumped and scattered trees throughout the harvest area.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Riparian Management Zones, Wetland Management Zones and wildlife retention trees (scattered and clumped) will remain following within the proposal area following harvest. These trees will help to fragment the timber sale units and reduce the visual impact of the harvest when viewed from the north side of the Cowlitz River. The site will be replanted after harvest or will be allowed to regenerate naturally.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Does not apply.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Does not apply.

c. What existing off-site sources of light or glare may affect your proposal?

Does not apply.

d. Proposed measures to reduce or control light and glare impacts, if any:

Does not apply.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

Dispersed informal recreation in the form of hunting, berry picking, sightseeing, fishing etc.

b. Would the proposed project displace any existing recreational uses? If so, describe:

Some recreational opportunities will be temporarily displaced during logging operations on the timber harvest area.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

None have been identified.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

None have been identified.

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)

None.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

This proposal will use forest roads, accessed by Winston Creek Road (county road).

1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?

No.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No.

c. How many parking spaces would the completed project have? How many would the project eliminate?

Does not apply.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

See A.11.

1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?

This proposal will increase the traffic, temporarily, by up to 20 vehicle and log truck round trips per day and should not affect the overall transportation system in the area.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Up to 20 round trips per day could occur during road construction and logging operations. After harvest activities are complete, vehicular trips to the site will be generated for future forest management purposes.

g. Proposed measures to reduce or control transportation impacts, if any:

A gate will be installed on the W-1300 road.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

Does not apply.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Does not apply.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

Does not apply.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Does not apply.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: ___Bruce Chandler_____Forester I_____Date: April 21, 2004
Title

Reviewed by: _____Date: _____
Title